

OIKE

## RAW SEQUENCE LISTING

DATE: 08/23/2001

PATENT APPLICATION: US/09/929,955

TIME: 17:35:08

Input Set : A:\TRIPEP23AUS2.TXT

Output Set: N:\CRF3\08162001\I929955.raw

ENTERED

4 <110> APPLICANT: Matti Sallberg  
 5 Catharina Hultgren  
 7 <120> TITLE OF INVENTION: VACCINES CONTAINING RIBAVIRIN AND  
 8 METHODS OF USE THEREOF  
 11 <130> FILE REFERENCE: TRIPEP.23AUS2  
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/929,955  
 C--> 13 <141> CURRENT FILING DATE: 2001-08-15  
 13 <150> PRIOR APPLICATION NUMBER: 09/705,547  
 14 <151> PRIOR FILING DATE: 2000-11-03  
 16 <150> PRIOR APPLICATION NUMBER: 60/229,175  
 17 <151> PRIOR FILING DATE: 2000-08-29  
 19 <150> PRIOR APPLICATION NUMBER: 60/225,767  
 20 <151> PRIOR FILING DATE: 2000-08-17  
 22 <160> NUMBER OF SEQ ID NOS: 49  
 24 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 3011  
 28 <212> TYPE: PRT  
 29 <213> ORGANISM: Artificial Sequence ✓  
 31 <220> FEATURE:  
 32 <223> OTHER INFORMATION: Hepatitis C virus sequence ✓  
 34 <400> SEQUENCE: 1  
 35 Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn  
 36 1 5 10 15  
 37 Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly  
 38 20 25 30  
 39 Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala  
 40 35 40 45  
 41 Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro  
 42 50 55 60  
 43 Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly  
 44 65 70 75 80  
 45 Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp  
 46 85 90 95  
 47 Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro  
 48 100 105 110  
 49 Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys  
 50 115 120 125  
 51 Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu  
 52 130 135 140  
 53 Gly Gly Ala Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp  
 54 145 150 155 160  
 55 Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile  
 56 165 170 175  
 57 Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr  
 58 180 185 190  
 59 Gln Val Arg Asn Ser Ser Gly Leu Tyr His Val Thr Asn Asp Cys Pro

Non covered  
 check diskette

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60          195          200          205
61 Asn Ser Ser Val Val Tyr Glu Ala Ala Asp Ala Ile Leu His Thr Pro
62          210          215          220
63 Gly Cys Val Pro Cys Val Arg Glu Gly Asn Ala Ser Arg Cys Trp Val
64 225          230          235          240
65 Ala Val Thr Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro Thr Thr
66          245          250          255
67 Gln Leu Arg Arg His Ile Asp Leu Leu Val Gly Ser Ala Thr Leu Cys
68          260          265          270
69 Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val Gly
70          275          280          285
71 Gln Leu Phe Thr Phe Ser Pro Arg His His Trp Thr Thr Gln Asp Cys
72          290          295          300
73 Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Ala Trp
74 305          310          315          320
75 Asn Met Met Met Asn Trp Ser Pro Thr Ala Ala Leu Val Val Ala Gln
76          325          330          335
77 Leu Leu Arg Ile Pro Gln Ala Ile Met Asp Met Ile Ala Gly Ala His
78          340          345          350
79 Trp Gly Val Leu Ala Gly Ile Lys Tyr Phe Ser Met Val Gly Asn Trp
80          355          360          365
81 Ala Lys Val Leu Val Val Leu Leu Leu Phe Ala Gly Val Asp Ala Glu
82          370          375          380
83 Thr His Val Thr Gly Gly Asn Ala Gly Arg Thr Thr Ala Gly Leu Val
84 385          390          395          400
85 Gly Leu Leu Thr Pro Gly Ala Lys Gln Asn Ile Gln Leu Ile Asn Thr
86          405          410          415
87 Asn Gly Ser Trp His Ile Asn Ser Thr Ala Leu Asn Cys Asn Glu Ser
88          420          425          430
89 Leu Asn Thr Gly Trp Leu Ala Gly Leu Phe Tyr Gln His Lys Phe Asn
90          435          440          445
91 Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Arg Leu Thr Asp
92          450          455          460
93 Phe Ala Gln Gly Trp Gly Pro Ile Ser Tyr Ala Asn Gly Ser Gly Leu
94 465          470          475          480
95 Asp Glu Arg Pro Tyr Cys Trp His Tyr Pro Pro Arg Pro Cys Gly Ile
96          485          490          495
97 Val Pro Ala Lys Ser Val Cys Gly Pro Val Tyr Cys Phe Thr Pro Ser
98          500          505          510
99 Pro Val Val Val Gly Thr Thr Asp Arg Ser Gly Ala Pro Thr Tyr Ser
100          515          520          525
101 Trp Gly Ala Asn Asp Thr Asp Val Phe Val Leu Asn Asn Thr Arg Pro
102          530          535          540
103 Pro Leu Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Ser Thr Gly Phe
104 545          550          555          560
105 Thr Lys Val Cys Gly Ala Pro Pro Cys Val Ile Gly Gly Val Gly Asn
106          565          570          575
107 Asn Thr Leu Leu Cys Pro Thr Asp Cys Phe Arg Lys Tyr Pro Glu Ala
108          580          585          590

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```

109 Thr Tyr Ser Arg Cys Gly Ser Gly Pro Arg Ile Thr Pro Arg Cys Met
110      595      600      605
111 Val Asp Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Ile Asn Tyr
112      610      615      620
113 Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Leu
114 625      630      635      640
115 Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp
116      645      650      655
117 Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Gln Trp
118      660      665      670
119 Gln Val Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly
120      675      680      685
121 Leu Ile His Leu His Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly
122      690      695      700
123 Val Gly Ser Ser Ile Ala Ser Trp Ala Ile Lys Trp Glu Tyr Val Val
124 705      710      715      720
125 Leu Leu Phe Leu Leu Ala Asp Ala Arg Val Cys Ser Cys Leu Trp
126      725      730      735
127 Met Met Leu Leu Ile Ser Gln Ala Glu Ala Ala Leu Glu Asn Leu Val
128      740      745      750
129 Ile Leu Asn Ala Ala Ser Leu Ala Gly Thr His Gly Leu Val Ser Phe
130      755      760      765
131 Leu Val Phe Phe Cys Phe Ala Trp Tyr Leu Lys Gly Arg Trp Val Pro
132      770      775      780
133 Gly Ala Val Tyr Ala Leu Tyr Gly Met Trp Pro Leu Leu Leu Leu Leu
134 785      790      795      800
135 Leu Ala Leu Pro Gln Arg Ala Tyr Ala Leu Asp Thr Glu Val Ala Ala
136      805      810      815
137 Ser Cys Gly Gly Val Val Leu Val Gly Leu Met Ala Leu Thr Leu Ser
138      820      825      830
139 Pro Tyr Tyr Lys Arg Tyr Ile Ser Trp Cys Met Trp Trp Leu Gln Tyr
140      835      840      845
141 Phe Leu Thr Arg Val Glu Ala Gln Leu His Val Trp Val Pro Pro Leu
142      850      855      860
143 Asn Val Arg Gly Gly Arg Asp Ala Val Ile Leu Leu Thr Cys Val Val
144 865      870      875      880
145 His Pro Ala Leu Val Phe Asp Ile Thr Lys Leu Leu Leu Ala Ile Phe
146      885      890      895
147 Gly Pro Leu Trp Ile Leu Gln Ala Ser Leu Leu Lys Val Pro Tyr Phe
148      900      905      910
149 Val Arg Val Gln Gly Leu Leu Arg Ile Cys Ala Leu Ala Arg Lys Ile
150      915      920      925
151 Ala Gly Gly His Tyr Val Gln Met Ala Ile Ile Lys Leu Gly Ala Leu
152      930      935      940
153 Thr Gly Thr Cys Val Tyr Asn His Leu Ala Pro Leu Arg Asp Trp Ala
154 945      950      955      960
155 His Asn Gly Leu Arg Asp Leu Ala Val Ala Val Glu Pro Val Val Phe
156      965      970      975
157 Ser Arg Met Glu Thr Lys Leu Ile Thr Trp Gly Ala Asp Thr Ala Ala

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158          980          985          990
159 Cys Gly Asp Ile Ile Asn Gly Leu Pro Val Ser Ala Arg Arg Gly Gln
160          995          1000          1005
161 Glu Ile Leu Leu Gly Pro Ala Asp Gly Met Val Ser Lys Gly Trp Arg
162          1010          1015          1020
163 Leu Leu Ala Pro Ile Thr Ala Tyr Ala Gln Gln Thr Arg Gly Leu Leu
164 1025          1030          1035          1040
165 Gly Cys Ile Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu
166          1045          1050          1055
167 Gly Glu Val Gln Ile Val Ser Thr Ala Thr Gln Thr Phe Leu Ala Thr
168          1060          1065          1070
169 Cys Ile Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Thr Arg
170          1075          1080          1085
171 Thr Ile Ala Ser Pro Lys Gly Pro Val Ile Gln Thr Tyr Thr Asn Val
172          1090          1095          1100
173 Asp Gln Asp Leu Val Gly Trp Pro Ala Pro Gln Gly Ser Arg Ser Leu
174 1105          1110          1115          1120
175 Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His
176          1125          1130          1135
177 Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu
178          1140          1145          1150
179 Leu Ser Pro Arg Pro Ile Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro
180          1155          1160          1165
181 Leu Leu Cys Pro Thr Gly His Ala Val Gly Leu Phe Arg Ala Ala Val
182          1170          1175          1180
183 Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Ile Pro Val Glu Asn
184 1185          1190          1195          1200
185 Leu Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro
186          1205          1210          1215
187 Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr
188          1220          1225          1230
189 Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Lys Gly
190          1235          1240          1245
191 Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe
192          1250          1255          1260
193 Gly Ala Tyr Met Ser Lys Ala His Gly Val Asp Pro Asn Ile Arg Thr
194 1265          1270          1275          1280
195 Gly Val Arg Thr Ile Thr Thr Gly Ser Pro Ile Thr Tyr Ser Thr Tyr
196          1285          1290          1295
197 Gly Lys Phe Leu Ala Asp Ala Gly Cys Ser Gly Gly Ala Tyr Asp Ile
198          1300          1305          1310
199 Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ala Thr Ser Ile Ser Gly
200          1315          1320          1325
201 Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val
202          1330          1335          1340
203 Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Ser His Pro
204 1345          1350          1355          1360
205 Asn Ile Glu Glu Val Ala Leu Ser Thr Thr Gly Glu Ile Pro Phe Tyr
206          1365          1370          1375

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```

207 Gly Lys Ala Ile Pro Leu Glu Val Ile Lys Gly Gly Arg His Leu Ile
208           1380           1385           1390
209 Phe Cys His Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Val
210           1395           1400           1405
211 Ala Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser
212           1410           1415           1420
213 Val Ile Pro Thr Ser Gly Asp Val Val Val Val Ser Thr Asp Ala Leu
214 1425           1430           1435           1440
215 Met Thr Gly Phe Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr
216           1445           1450           1455
217 Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile
218           1460           1465           1470
219 Glu Thr Thr Thr Leu Pro Gln Asp Ala Val Ser Arg Thr Gln Arg Arg
220           1475           1480           1485
221 Gly Arg Thr Gly Arg Gly Lys Pro Gly Ile Tyr Arg Phe Val Ala Pro
222           1490           1495           1500
223 Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys
224 1505           1510           1515           1520
225 Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Thr
226           1525           1530           1535
227 Val Arg Leu Arg Ala Tyr Met Asn Thr Pro Gly Leu Pro Val Cys Gln
228           1540           1545           1550
229 Asp His Leu Gly Phe Trp Glu Gly Val Phe Thr Gly Leu Thr His Ile
230           1555           1560           1565
231 Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ser Gly Glu Asn Phe Pro
232           1570           1575           1580
233 Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro
234 1585           1590           1595           1600
235 Pro Pro Ser Trp Asp Gln Met Arg Lys Cys Leu Ile Arg Leu Lys Pro
236           1605           1610           1615
237 Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln
238           1620           1625           1630
239 Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Thr Cys
240           1635           1640           1645
241 Met Ser Ala Asp Leu Glu Val Val Thr Ser Thr Trp Val Leu Val Gly
242           1650           1655           1660
243 Gly Val Leu Ala Ala Leu Ala Ala Tyr Cys Leu Ser Thr Gly Cys Val
244 1665           1670           1675           1680
245 Val Ile Val Gly Arg Ile Val Leu Ser Gly Lys Pro Ala Ile Ile Pro
246           1685           1690           1695
247 Asp Arg Glu Val Leu Tyr Gln Glu Phe Asp Glu Met Glu Glu Cys Ser
248           1700           1705           1710
249 Gln His Leu Pro Tyr Ile Glu Gln Gly Met Met Leu Ala Glu Gln Phe
250           1715           1720           1725
251 Lys Gln Lys Ala Leu Gly Leu Leu Gln Thr Ala Ser Arg His Ala Glu
252           1730           1735           1740
253 Val Ile Thr Pro Ala Val Gln Thr Asn Trp Gln Lys Leu Glu Val Phe
254 1745           1750           1755           1760
255 Trp Ala Lys His Met Trp Asn Phe Ile Ser Gly Ile Gln Tyr Leu Ala

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/929,955

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TIME: 17:35:09

Input Set : A:\TRIPEP23AUS2.TXT

Output Set: N:\CRF3\08162001\I929955.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:1905 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:29

*OK*